## CLAIMS

1. A method comprising:

forming a layer of high-K dielectric material on a layer of substrate material;

forming at least a first gate and a second gate on the layer of high-K dielectric material, leaving an exposed portion of the high-K material between the first and second gates;

exposing the exposed portion of the layer of high-K dielectric material to hydrogen to reduce the exposed portion to form a metallic portion from the exposed portion;

removing the metallic portion from the layer of high-K material by exposing the metallic portion to a wet chemical etchant selective to the metallic portion to form a trench; and

forming spacers adjacent to the first gate and the second gate.

2. The method of claim 1 wherein forming the spacers comprises forming the spacers adjacent the gates after removing the metallic portion from the layer of high-K material.

3. The method of claim 2 wherein at least one spacer extends from substantially a top surface of one of the first and second gates into the trench to a bottom surface of the trench.

4. The method of claim 1 wherein forming the spacers comprises forming the spacers before exposing the exposed portion of the layer of high-K dielectric material to hydrogen.

5. The method of claim 4 wherein the spacers extend from substantially the top surface of the gates to which that spacer is adjacent to a top surface of the layer of high-K dielectric material.

6. The method of claim 1 wherein the high-K dielectric material comprises Hafnium dioxide and wherein the metallic portion comprises Hafnium.

7. The method of claim 1 wherein the high-K dielectric material comprises Zirconium dioxide and wherein the metallic portion comprises Zirconium.

8. The method of claim 1 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen in a plasma chamber.

9. The method of claim 8 wherein the layer of high-K dielectric material is disposed in the plasma chamber at a distance from a plate ranging from about 5 mm to about 10 mm.

10. The method of claim 8 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen at a flow rate that ranges from about 1000 SCCM to about 2000 SCCM.

11. A method comprising:

forming a layer of high-K dielectric material on a substrate;

exposing an exposed portion of the layer of high-K dielectric material to hydrogen to reduce the exposed portion of the layer of high-K dielectric material to form a metallic portion from the exposed portion; and

removing the metallic portion from the layer of high-K material by exposing the metallic portion to a wet chemical etchant selective to the metallic portion.

12. The method of claim 11 wherein the high-K dielectric material comprises Hafnium dioxide and wherein the metallic portion comprises Hafnium.

13. The method of claim 11 wherein the high-K dielectric material comprises Zirconium dioxide and wherein the metallic portion comprises Zirconium.

14. The method of claim 11 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen in a plasma chamber.

15. The method of claim 14 wherein the layer of high-K dielectric material is disposed in the plasma chamber at a distance from a plate ranging from about 5 mm to about 10 mm.

16. The method of claim 14 wherein exposing the exposed portion of the layer of high-K dielectric material to hydrogen comprises exposing the exposed portion of the layer of high-K dielectric material to hydrogen at a flow rate that ranges from about 1000 SCCM to about 2000 SCCM.

17. The method of claim 11 wherein the wet chemical etchant comprises a sulfuric acid and hydrogen peroxide based etch chemistry.

18. The method of claim 17 wherein the etch chemistry is a piranha etch chemistry.

19. The method of claim 11 wherein the wet chemical etchant comprises a hydrochloric acid and hydrogen peroxide based etch chemistry.

20. The method of claim 19 wherein the etch chemistry is an SC2 etch chemistry.

21. A method to form a trench having substantially zero etch bias through a thin film of high-K dielectric material comprising:

exposing an exposed portion of the film of high-K dielectric material to hydrogen to reduce the exposed portion to form a metallic portion from the exposed portion; and

removing the metallic portion from the layer of high-K material by exposing the metallic portion to a wet chemical etchant selective to the metallic portion..

22. The method of claim 21 wherein the wet chemical etchant comprises a sulfuric acid and hydrogen peroxide based etch chemistry.

23. The method of claim 22 wherein the etch chemistry is a piranha etch chemistry.

24. The method of claim 21 wheren the wet chemical etchant comprises a hydrochloric acid and hydrogen peroxide based etch chemistry.

25. The method of claim 24 wherein the etch chemistry is an SC2 etch chemistry.

26. The method of claim 21 wherein the high-K dielectric material comprises Hafnium dioxide and wherein the metallic portion comprises Hafnium.

27. The method of claim 21 wherein the high-K dielectric material comprises Zirconium dioxide and wherein the metallic portion comprises Zirconium.